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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

ADVISORY ACTION

Continuation of 3. The proposed amendments AFTER FINAL, filed 12 May 2009, will not be entered because they raise new issues that would require further consideration and/or search. The proposed amendments AFTER FINAL to independent claims 1 and 30 would change the scope and breadth of the claim, and would require further consideration and/or search based on the new scope of the claim. Further, the proposed amendments AFTER FINAL do not fully overcome the rejection under 112 1st and 2nd set forth in the Final Office Action mailed 26 Nov 2008 because the identified terms "substituted" with regard to aryl, heteroaryl and aroyl groups, "leaving group," "photolabile protective group," "functional group useful in oligonucleotide synthesis," "protective group useful in oligonucleotide synthesis," "chemical modifications thereof," "chemically modified," and "analog" remain in the proposed amendments.

Continuation of 11. Applicant's Remarks, filed 12 May 2009, have been fully considered and found not to be persuasive.

With regard to the rejection under 112 1st and 2nd set forth in the Final Office Action mailed 26 Nov 2008 Applicant again notes that one of skill in the art would understand what is meant by the terms "substituted", "leaving group," "photolabile protective group," "functional group useful in oligonucleotide synthesis," "protective group useful in oligonucleotide synthesis," "chemical modifications thereof," "chemically modified," and "analog" remain in the proposed amendments. However, as recited in the Final Office Action mailed 26 Nov 2008, the examples provided in the specification

as indicated in Applicant's remarks are all non-limiting examples. While the examples are sufficiently described, these terms are not limited to these examples.

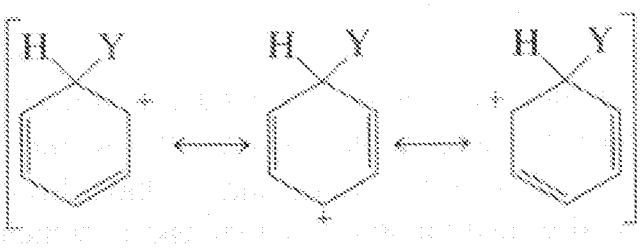
With regard to the rejection under the 112 1st written description requirement, it is reiterated that species specifically disclosed are not representative of the genus of the term because the genus is highly variant. Therefore the species disclosed, and not the full breadth of the claims, meet the written description provision of 35 USC § 112, first paragraph. It is noted that Applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*. Adequate written description requires more than a mere statement that it is part of the invention and non-limiting examples of the genus that are not representative of the fully scope of the genus.

With regard to the rejection under 112 2nd as being indefinite, it is reiterated that the specification does not clearly define or point out what type of groups will be used in substitution and in what positions the substitutions will occur. Analogous to the reasoning regarding the 112 1st written description requirement, the examples provided in the specification as indicated in Applicant's remarks are all non-limiting examples. While the examples are sufficiently described, these terms are not limited to these examples. With regard to the rejection under 112 2nd as being indefinite, over the phrase "OH-protective group", it is reiterated that one possessing the ordinary level of skill in the pertinent art at the time the invention was made would understand the examples identified are encompassed within the language, but absent a definition of

what structural features are required by said language, one of ordinary skill in the art would not know the metes and bounds of the claim with clarity and precision sufficient so as to understand how to avoid infringement.

With regard to amended claims 1, 3, 5 and 7-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Pfleiderer et al. (US Patent 5,763,599, issued 09 Jun 1998, of record) and Fodor et al. (US Patent 5,489,678, issued 06 Feb 1996, of record), Applicant comments that Examiner's reasoning regarding π-conjugated systems appears to be at odds regarding the conjugation of the C=O groups on the phenyl ring in compounds 5 and 6 compared to compound 7 in Table 1 of the specification at page 53. However, the nature of the examples is relevant. The carboxylate group of which the C=O groups is well known to be an electron withdrawing group. As the photo-excitation of the aromatic ring chromophore is depending on the electron density of the π-conjugated system, it is not unexpected that an electron withdrawing group would reduce the photolysis rate when compared to a system lacking any electron withdrawing group. It is proposed that a more relevant comparison would be between compounds 5 and 6 compared to a compound wherein that position has a comparable electron withdrawing effect but is unable to participate in any π-bond conjugation.

Applicant also comments with regard to the examples wherein the phenyl is located *para-* or *meta-* to a nitro group. Again, the nature of the example is relevant. It is well known in the art that the aromatic resonance structure of an aryl ring, for example addition of a cation Y to a benzene ring gives the π-bond resonance structure

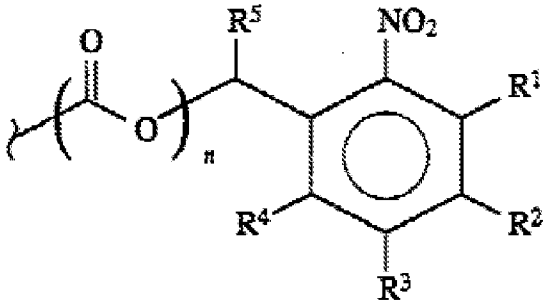
for the resultant cation  which relates the *ortho-* and *para-* positions but excludes the *meta-* position. Therefore it is not unexpected that π-bond conjugation with a group in a *para-* position would be different than a group in the *meta-* position that is cannot be related as a π-bond resonance structure.

With regard to the number of substituents in the figure cited in Fodor et al., Applicant states that R^3 appears to be on the carbon adjacent to the carboxy group of the compound and therefore not relevant to the phenyl ring. However, despite the small font used in the figure at column 19, lines 50-60 of Fodor et al., it appears the R^3 is on the phenyl ring *para-* to the NO_2 group. An excerpt of the relevant section of Fodor et

al. as it appears to Examiner is provided:

et al., *J. Org. Chem.* (1974) 39:192, which are incorporated herein by reference.

A preferred class of photoremovable protecting groups has the general formula:



where R^1, R^2, R^3, and R^4 independently are a hydrogen atom, a lower alkyl, aryl, benzyl, halogen, hydroxyl, alkoxyl, thiol, thioether, amino, nitro, carboxyl, formate, formamido or phosphido group, or adjacent substituents (i.e., R^1-R^2, R^2-R^3, R^3-R^4) are substituted oxygen groups that together form a cyclic acetal or ketal; R^5 is a hydrogen atom, a alkoxyl, alkyl, hydrogen, halo, aryl, or alkenyl

With regard to rejection of amended claims 30-32 and 34-46 rejected under 35 U.S.C. 103(a) as being unpatentable over Pfleiderer et al. (US Patent 5,763,599, issued 09 Jun 1998, of record) in view of Haugland et al. (US Patent 5,635,608, issued 03 Jun 1997, of record), Applicant notes that the invention of Haugland et al. is drawn to a photolabile group bonded through a benzyl rather than phenethyl type structure. However, Pfleiderer et al. is relied upon to teach the phenethyl type structure, while the teaching of Haugland et al. is drawn to the aromatic ring chromophore of the photolabile

group, and one of ordinary skill in the art would expect that the light absorbance characteristics of a chromophore comprising an aromatic ring would not be significant by significantly different between a benzyl or phenethyl type structure.

/Shaojia Anna Jiang/

Supervisory Patent Examiner, Art Unit 1623